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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,016	04/01/2004	Gal Shafirstein	8793-53427	9554

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EXAMINER

HYUN, PAUL SANG HWA

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,016

Applicant(s)

SHAFIRSTEIN ET AL.

Examiner

Paul S. Hyun

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/30/2004, 11/15/2004, 12/09/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krumdieck (U.S. Patent 5,522,294) in view of Ciarrocca et al. (U.S. PG Pub US 2005/0131402 A1).

In reference to claims 1 and 7, Krumdieck discloses a microtome comprising:

A blade 42 biased with respect to a tissue sample for cutting the tissue sample;

A tissue holder in the form of a well 32;

A reservoir 14 containing buffer for submerging the tissue sample during sectioning (see claim 13); and

A means for moving the cutting tool in selected planes (see claim 2);

However, the reference does not disclose a means for sectioning a tissue sample by electro-dissociation.

Ciarrocca et al. disclose an electrosurgical device that utilizes radio frequency to section a tissue sample in the presence of electrically-conductive fluid medium (see [0102]. The device comprises:

A radio frequency (RF) generator (see [0130]) in communication with an electrode 58 that treats the tissue sample; and

Fluid source 21 for supplying electrically conductive fluid 50.

It would have been obvious to one of ordinary skill in the art to substitute blade 42 disclosed by Krumdieck for an RF emitting electrode 58 and also provide an RF generator to the Krumdieck apparatus such that the RF generator is operatively connected to the electrode 58 and well 32. The modified apparatus would be able to section a tissue sample without applying pressure to the tissue sample.

In reference to claim 13, the Krumdieck reference discloses a method for sectioning tissue samples, the method comprising the steps of:

Providing a blade 42 biased with respect to the tissue sample (see claim 1); and

Passing the blade 42 through the tissue sample in a defined plane to section the sample (see claim 2);

However, the reference does not disclose sectioning the tissue sample by electro-dissociation or sectioning the tissue sample submerged in a cooling liquid.

Ciarrocca et al. disclose an electrosurgical device that utilizes radio frequency to section a tissue sample in the presence of electrically-conductive fluid medium. The reference discloses a method for cutting a tissue sample, the method comprising the steps of:

Providing a cutter in the form of an electrode 58 biased electrically with respect to the tissue sample (see claim 134); and

Cutting the tissue sample submerged in electrically conductive fluid for cooling the tissue (see [0099]).

It would have been obvious to one of ordinary skill in the art to modify the method of sectioning a tissue sample disclosed by Krumdieck so that the tissue sample is cut using a radio frequency producing electrode in the presence of an electrically conductive fluid as taught by Ciarrocca et al. Such a method would allow a tissue sample to be sectioned without applying pressure to the tissue sample.

2. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krumdieck in view of Ciarrocca et al. as applied to claims 1 and 7 above, and further in view of Asakura et al. (U.S. Patent 5,752,425).

The apparatus as recited in claims 1 and 7 are disclosed by Krumdieck in view of Ciarrocca et al., but the references do not disclose that the translation movements of the apparatus is controlled by a computer.

Asakura et al. disclose a microtome wherein the sectioning process is automated by a microcomputer 17 (see lines 43-55 col. 6). The microcomputer 17 controls the movement of the cutting knife 6 in the x-y axis and the movement of the tissue sample 14 in the z-axis.

It would have been obvious to one of ordinary skill in the art to provide a microcomputer as taught by Asakura et al. to the modified Krumdieck apparatus so that the tissue sectioning process can be automated.

3. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krumdieck in view of Ciarrocca et al. as applied to claims 1 and 7 above, and further in view of McGuckin Jr. et al. (U.S. PG Pub US 2004/0087942 A1).

The apparatus as recited in claims 1 and 7 are disclosed by Krumdieck in view of Ciarrocca et al., but the references do not disclose that the cutting tool is a wire.

McGuckin Jr. et al. disclose a surgical biopsy device that utilizes a wire charged with radio frequency to section tissue samples (see claim 1). It would have been obvious to one of ordinary skill in the art to provide the modified Krumdieck apparatus with a cutting tool in the form of a wire to cut tissue samples having dimensions that are more applicable for a wire.

4. Claims 4, 5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krumdieck in view of Ciarrocca et al. as applied to claims 1 and 7 above, and further in view of Long et al. (U.S. Patent 5,556,397).

Krumdieck in view of Ciarrocca et al. disclose the apparatus as recited in claim 1, but the references do not disclose a multi-layered blade as recited in the claims.

Long et al. disclose an electrosurgical instrument that utilizes a multi-layered blade in the form of an electrode assembly 608. Fig. 7A of the reference shows that the electrode assembly 608 comprises an inner electrode 702, which is covered by an insulating sleeve 704, which is covered by an outer electrode 706. Fig 7A also shows that the insulating sleeve 704 is cut into a sharp point and that the inner electrode 702 extends beyond the insulating sleeve 704.

It would have been obvious to one of ordinary skill in the art to provide the modified Krumdieck apparatus with a cutting tool in the form of a multi-layered blade since the multi-layered blade disclosed by Long et al. enables the user to make simultaneous electrical contact by the two electrodes with the tissue (see lines 37-50 col. 3).

5. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krumdieck in view of Ciarrocca et al. as applied to claims 1 and 13 above, and further in view of Becker (U.S. Patent 4,414,188).

The apparatus as recited in claim 1 and the method as recited in claim 13 are disclosed by Krumdieck in view of Ciarrocca et al., but the references do not disclose a means for stirring the contents of a bath.

However, it is well known in the art to stir the contents of a bath that contains ions. Becker discloses a salt bath that includes an electrically operated stirrer 70 that automatically and continuously stirs the contents of the bath (see lines 36-40 col. 3). It would have been obvious to one of ordinary skill in the art to provide the reservoir 14 of the modified Krumdieck apparatus with a stirring means as taught by Becker so that the accumulated ions resulting from the electrodisassociation can be dispersed.

It also would have been obvious to include the step of stirring the reservoir 14 during the sectioning process in order to disperse the ions accumulated from the electrodisassociation.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krumdieck in view of Ciarrocca et al. and Asakura et al. as applied to claim 8 above, and further in view of Becker.

The apparatus as recited in claim 8 is disclosed by Krumdieck in view of Ciarrocca et al. and Asakura et al., but the references do not disclose a means for stirring the contents of a bath.

Becker discloses a salt bath that includes an electrically operated stirrer 70 that automatically and continuously stirs the contents of the bath (see lines 36-40 col. 3). It would have been obvious to one of ordinary skill in the art to provide the reservoir 14 of the modified Krumdieck apparatus with a stirring means as taught by Becker so that the accumulated ions resulting from the electrodisassociation can be dispersed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul S. Hyun whose telephone number is (571)-272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PSH 8/8/05


YEENA GAKH
PRIMARY EXAMINER